

REMARKS

Claims 1-4, 6, 8-13 and 15-28 are currently pending in this application. Claims 1, 13 and 23 have been amended to more particularly point out Applicants' invention. Claims 5, 7 and 14 have been cancelled. No new matter has been added to this application.

Rejection of Claims 1- 3, 6, 8-13, 15, 17-20 and 22 under 35 U.S.C. § 102 (e)

The Examiner has rejected claims 1- 3, 6, 8-13, 15, 17-20 and 22 under 35 U.S.C. § 102 (e) as being anticipated by U.S. Patent Application No. 2002/0080170 A1 (Goldberg). The Examiner contends that Goldberg discloses Applicants' invention as claimed. Applicants respectfully traverse the rejection.

Applicants' invention is directed to an automated method for locating hotspots in a PDF file, and for creating cross-referenced AIUs in hypermedia documents. The PDF files are mixed mode documents, e.g., a mixture of text and a variety of different types of images such as black and white, grayscale and color. The present invention locates text and non-text areas in the document and applies different processing methods to each type of area. Context is determined for each area of interest and stored in structured manner that follows a predetermined syntax and grammar that allows the method to refer to that context while creating automatic hyperlinks between different documents and media types.

Goldberg discloses an information management system for performing user-selectable information management processes on any user-selectable information source from among a plurality of information sources. Goldberg's information management system is used primarily for searching documents and matching document requests. Unlike the present invention, Goldberg does not teach or disclose a system that identifies context, which is stored in an AIU. The present invention is directed to organizational method used to identify and locate

hotspots in documents from a system operations standpoint. Goldberg, on the other hand, is directed to a method for a user to organize documents.

Goldberg is directed to retrieving formatted information source (such as CNN.com) and extract content from the source by taking advantage of the existing formatting provided by the source (i.e., existing hyperlinks, organizational tools, arrangement of content, etc.). The present invention is directed to formatting a currently unformatted PDF file. As such, previously unidentified text must be identified both in the traditional text areas and in traditionally non-text areas such as images. The present invention is able to identify areas containing potential text by using the smearing techniques described. Once text is identified, its context is identified and then a hyperlink can be associated with that text if desirable. Goldberg does not teach or disclose such a technique because Goldberg is primarily concerned with searching existing formatted documents and extracting information for a user based on user criteria. Goldberg does not teach or provide a system level solution as is recited in the present invention.

The present invention is directed to dealing with mixed-mode PDF documents. Goldberg does not extract text from both text and image objects and create a tree structure of the objects. Nor does Goldberg define the text objects as AIU based on the context of the object as is recited in the present invention. Applicants submit that Goldberg does not teach or disclose Applicants' invention as claimed and respectfully request that the rejection of claims 1- 3, 6, 8-13, 15, 17-20 and 22 under 35 U.S.C. § 102 (e) be withdrawn.

Rejection of Claims 4, 23 and 25-28 under 35 U.S.C. § 103 (a)

The Examiner has rejected claims 4, 23 and 25-28 under 35 U.S.C. § 103 (a) as being unpatentable over Goldberg in view of U.S. Patent Application No. 2001/0047373 A1 (Jones). The Examiner correctly notes that Goldberg does not teach or disclose a black and white image processor that includes a pixel

smearing component and an image filtering component. The Examiner contends that Jones discloses a black and white image processor that includes a pixel smearing component and an image filtering component. The Examiner argues that it would have been obvious to one of ordinary skill in the art to modify Goldberg to include the image processor of Jones. Applicants respectfully traverse the rejection.

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Jones discloses a computerized information display system that extracts text data, lists of keywords, story rankings in order of story importance and image maps identifying the location of stories from an input of publication files from a publisher. Jones, like Goldberg is a user-based method for identifying stories of interest from an electronic source and retrieving those stories. In the case of Jones, both text and images are retrieved. However, unlike the present invention, Jones does not teach or disclose assigning AIUs to text of a document based on context. Jones also does not teach or disclose a system level analysis of a document to identify previously unidentified text located in both text and non-text areas. Jones allows users to highlight areas of a document and then retrieves the corresponding text and images from a database. The present invention has no database from which to retrieve such text and images because the present invention is directed to creating the database that is employed by Jones. Applicants submit that neither Goldberg nor Jones, whether taken alone or in combination, teach or disclose Applicants' invention as claimed and request that the rejection of claims 4, 23 and 25-28 under 35 U.S.C. § 103 (a) be withdrawn.

Rejection of Claims 16 and 21 under 35 U.S.C. § 103 (a)

The Examiner has rejected claims 16 and 21 under 35 U.S.C. § 103 (a) as being unpatentable over Goldberg in view of U.S. Patent Application No.2002/0035451 A1 (Rothermel). The Examiner correctly notes that Goldberg does not teach or disclose a black and white type of image or storing an

extracted text segment in Standard Generalized Markup Language. The Examiner contends that Rothermel discloses a black and white image type and use of Standard Generalized Markup Language. The Examiner argues that it would have been obvious to one of ordinary skill in the art to include the black and white image type and Standard Generalized Markup Language of Rothermel in the system of Goldberg. Applicants respectfully traverse the rejection.

Rothermel discloses a method of geo-spatially viewing project oriented data relating to CAD services. A geospatial visualization of project collaboration datasets is provided by adding a spatial reference to the project collaboration datasets. Rothermel, like Goldberg, does not teach or disclose assigning AIUs to text of a document based on context. Applicant's submit that neither Rothermel nor Goldberg, whether taken alone or in combination, teach or disclose Applicants' invention as claims and request that the rejection of claims 16 and 21 under 35 U.S.C. § 103 (a) be withdrawn.

Rejection of Claim 24 under 35 U.S.C. § 103 (a)

The Examiner has rejected claim 24 under 35 U.S.C. § 103 (a) as being unpatentable over Goldberg in view of Jones and further in view of Rothermel. Applicants respectfully traverse the rejection.

Applicants respectfully submit that neither Goldberg, Jones nor Rothermel, whether taken alone or in combination teach or disclose Applicants' invention as recited in claim 24. As discussed previously, the present invention is a system level method for formatting a previously unformatted document. As such text is identified in both text and non-text areas of the document. One technique employed is the ability to distinguish color image content from black and white image content in order to identify text in the document. In a typical mixed mode PDF file, all of the content is identified as image content and therefore, while text might exist in the document, it is not identified as such. The present invention uses image processing techniques to identify areas of the document that may


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contain text. The text is then associated with a context and assigned an AIU. None of the references cited by the Examiner teach or disclose such a method. Both Goldberg and Jones are directed to methods for searching for content contained in formatted documents and presume that not only is the text identified in the document, but that the content of the text is identified. Goldberg and Jones exploit this formatting to locate desired content. Rothermel, on the other hand, is directed to online CAD services and again is not concerned with the creation of AIUs. As such, Applicants request that the rejection of claim 24 be withdrawn.

Conclusion

Applicants respectfully submit that claims 1-4, 6, 8-13 and 15-28, as amended, are in condition for allowance and request that a timely Notice of Allowance be issued in this case. The Examiner is invited to contact the undersigned should he have any questions in this matter.

Respectfully submitted,



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